

Serial No. 09/768,271  
PNET.009D  
Petition dated April 14, 2005

Attn.: Technology Center Director

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of :  
Tsukasa Yajima : Art Unit: 2814  
Serial No.: 09/768,271 : Examiner: A. Mai  
Filed: January 25, 2001 : Confirm. No.: 3802  
For: SEMICONDUCTOR DEVICE HAVING PROTECTIVE LAYER ON FIELD OXIDE

**PETITION UNDER 37 C.F.R. 1.181(a)**  
**TO WITHDRAW HOLDING OF ABANDONMENT**

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Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Date: April 14, 2005

Sir:

In response to the Notice of Abandonment dated March 2, 2005, received in connection with the above identified application, Applicant respectfully petitions under the provisions of 37 C.F.R. 1.181(a) and Manual of Patent Examining Procedure section 711.03(c) for a Decision to Withdraw Holding of Abandonment.

The Notice of Abandonment dated March 2, 2005 (attached as Exhibit A), indicates that the above identified application was abandoned due to expiration of the period for seeking court review of the Decision by the Board of Patent Appeals and Interferences (attached as Exhibit B) rendered on **February 15, 2005.**

However, as set forth in 37 C.F.R. 1.304:

"The time for filing the notice of appeal to the U.S. Court of Appeals for the Federal Circuit (§1.302) or for commencing a civil action (§1.303) is two months from the date of the decision by the Board of Patent Appeals and Interferences".

Also, as set forth in 37 C.F.R. 1.114:

"If prosecution in an application is closed, an applicant may request continued examination of the application by filing a submission and the fee set forth in §1.17(e) prior to the earliest of:...(3) The filing of a notice of appeal to the U.S. Court of Appeals for the Federal Circuit under 35 U.S.C. 141, or the commencement of a civil action under 35 U.S.C. 145 or 146, unless the appeal or civil action is terminated".

As noted above, the Decision by the Board of Patent Appeals and Interferences is dated **February 15, 2005**. Accordingly, the period for seeking court review of the Decision by the Board of Patent Appeals and Interferences, either by way of filing a notice of appeal to the U.S. Court of Appeals for the Federal Circuit or by way of commencing a civil action, would expire on **April 15, 2005**.

Applicant therefore respectfully submits that the Notice of Abandonment dated March 2, 2005 is clearly erroneous, because the two (2) month period for seeking court review of the Decision by the Board of Patent Appeal and Interferences rendered on

February 15, 2005 has not yet expired. Accordingly, the present application should in fact not be abandoned. Applicant therefore respectfully requests that the holding of abandonment of the present application as dated March 2, 2005, be withdrawn.

Also filed concurrently herewith is a Request for Continued Examination (RCE) and a Preliminary Amendment, which should be made of record in the present application. Prompt and favorable examination of the present application in view of the corresponding RCE and Preliminary Amendment are respectfully requested.

Since this application has been improperly abandoned due to mistake on the part of the U.S. Patent and Trademark Office and indeed should not have been abandoned, it is believed that no petition fee is necessary in accordance with this petition (see Manual of Patent Examining Procedure Section 711.03(c)). In the event that a petition fee is deemed necessary by the U.S. Patent Office, it is respectfully requested that the necessary petition fee be charged to Deposit Account No. 50-0238.

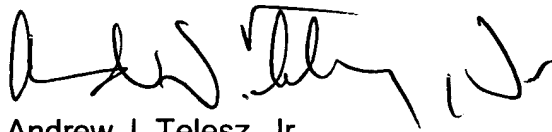
Also, in accordance with Manual of Patent Examining Procedure section 1002.02(c), petitions under 37 C.F.R. 1.181 considering holding of abandonment (MPEP section 711.03(c)), are to be decided by the corresponding Technology Center Director. Accordingly, favorably consideration and granting of this petition by the corresponding Technology Center Director are respectfully requested.

In the event that there are any outstanding matters remaining in the present application, please contact Andrew J. Telesz, Jr. (Reg. No. 33,581) at (571) 283-0720 in the Washington, D.C. area, to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment for any additional fees that may be required, or credit any overpayment, to Deposit Account No. 50-0238.

Respectfully submitted,

VOLENTINE FRANCOS, P.L.L.C.



Andrew J. Telesz, Jr.  
Reg. No. 33,581

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Tel. No. (571) 283-0720  
Fax No. (571) 283-0740

Enclosures: Exhibit A: Copy of Notice of Abandonment  
Exhibit B: Copy of Decision on Appeal dated February 15, 2005



UNITED STATES PATENT AND TRADEMARK OFFICE

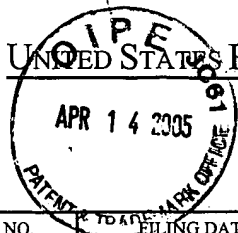


Exhibit A

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,271	01/25/2001	Tsukasa Yajima	PNET.009D	3802

7590 03/02/2005

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P.L.L.C.**

MAR 10 2005

**Received**

EXAMINER

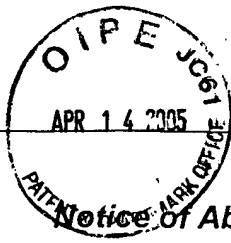
MAI, ANH D

ART UNIT PAPER NUMBER

2814

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



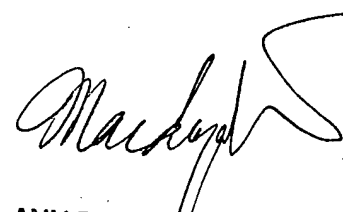
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<b>Notice of Abandonment</b>	Application No.	Applicant(s)	
	09/768,271	YAJIMA, TSUKASA	
	Examiner	Art Unit	
	Anh D. Mai	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

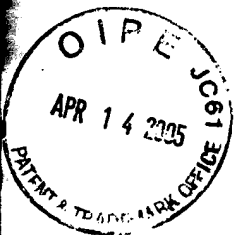
1. ☐ Applicant's failure to timely file a proper reply to the Office letter mailed on \_\_\_\_\_.
  - (a) ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.  
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - (c) ☐ A reply was received on \_\_\_\_\_ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
  - (d) ☐ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - (b) ☐ The submitted fee of \$\_\_\_\_\_ is insufficient. A balance of \$\_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$\_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$\_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☒ The decision by the Board of Patent Appeals and Interference rendered on 15 February 2005 and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☐ The reason(s) below:

  
ANH D. MAI  
PRIMARY EXAMINER

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

Exhibit B

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte TSUKASA YAJIMA

Appeal No. 2005-0520  
Application No. 09/768,271

ON BRIEF

Before KIMLIN, GARRIS and PAWLIKOWSKI, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 6-9 and 11-19, all of the claims remaining in the present application.

Claim 6 is illustrative:

6. A semiconductor device comprising:

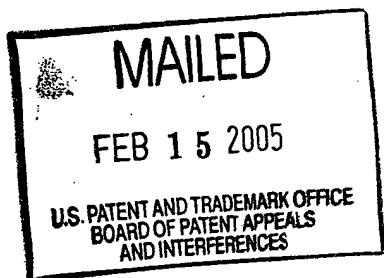
first and second gates formed on active regions of a substrate, said first and second gates each consisting of a refractory metal layer on a polysilicon layer;

a field oxide formed on the substrate between said first and second gates;

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FEB 23 2005

**Received**



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side walls formed on side surfaces of said first and second gates, said side walls being a silicon oxide film;

a protective layer formed selectively on said field oxide to prevent overetching of said field oxide, said protective layer being a material different than said field oxide; and

an insulating layer, a contact hole, and a connecting wire formed above a surface of the substrate.

The examiner relies upon the following reference in the rejection of the appealed claims:

Yoo et al. (Yoo)	5,605,853	Feb. 25, 1997
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Appellant's claimed invention is directed to a semiconductor device comprising first and second gates, a field oxide formed on the substrate between the gates, and a protective layer of polysilicon formed on the field oxide. According to appellant, "[p]olysilicon layer 12 prevents etching of field oxide 34 during this overetching of oxide layer 36, preventing decreases of field isolation voltage caused by thinning of field oxide 34 (page 14, lines 1-7)" (page 4 of Brief, second paragraph).

Appealed claims 6-9 and 11-19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yoo.



It is appellant's "wish to group all of claims 6-9 and 11-19 together." Accordingly, all of the appealed claims stand or fall together with claim 6.

We have thoroughly reviewed each of appellant's arguments for patentability, including the prior art evidence relied upon in support thereof. However, we are in complete agreement with the examiner that Yoo describes the claimed subject matter on appeal within the meaning of § 102. Accordingly, we will sustain the examiner's rejection for essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

Appellant does not dispute that the figures illustrated in the Yoo patent depict all of the features of the claimed semiconductor device. It is appellant's contention that protective polysilicon floating gate 21 of Yoo, although shown in the reference drawings as on the field oxide, cannot, in fact, be formed on field oxide layer 12 and still function as a working floating gate. According to appellant, "a floating gate typically must be formed on a relatively thin insulating layer, such as a tunnel oxide layer, so that exchange of charges between the diffusion layer and the floating gate may occur" (page 6 of

Brief, first paragraph). Appellant cites three references in support of this proposition.<sup>1</sup> Appellant maintains that relatively thin gate oxides are formed under floating gates, and appellant submits that "it should be understood that floating gate electrodes in general are formed on relatively thin gate oxides, as opposed to relatively thick field oxide layers" (page 7 of Brief, first paragraph, emphasis added). Appellant reasons that "one of ordinary skill should understand that floating gate 21 in Figs. 2-7 of the Yoo et al. reference cannot be formed on FOX layer 12 and be a functional floating gate" (page 8 of Brief, second paragraph). Appellant then concludes that "[f]loating gate 21 of the Yoo et al. reference is not specifically described as formed on FOX layer 12" (page 8 of Brief, last paragraph).

It is well settled that the presumption of validity attaching to the claims and supporting disclosure of a U.S. patent is substantial, and an applicant carries a heavy burden proving that a U.S. patent is inoperative or non-enabling. See In re Weber, 405 F.2d 1403, 1407, 160 USPQ 549, 553 (CCPA 1969);

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<sup>1</sup> I.E.E.E. Electron Device Letters by Haddad; U.S. Patent 4,637,128; and Silicon Processing for the VLSI Era, Volume 2: Process Integration.

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In re Spence, 261 F.2d 244, 246, 120 USPQ 82, 83 (CCPA 1958); In re Michalek, 162 F.2d 229, 231-32, 74 USPQ 107, 109 (CCPA 1947). In the present case, Yoo specifically claims forming the polysilicon floating gate over a field oxide region. While appellant contends that the floating gate of Yoo is disclosed as "formed over a field oxide region, not specifically on a field oxide region" (page 8 of Brief, last paragraph), we agree with the examiner that when the patent claims are read in light of the accompanying illustrative drawings, it is proper to conclude that Yoo claims a polysilicon floating gate on, and in contact with, the field oxide region. Moreover, the presumption of validity and enablement of a U.S. patent attaches to unclaimed disclosures as well as claimed subject matter. Amgen, Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1355, 65 USPQ2d 1385, 1416 (Fed. Cir. 2003).

As for the references cited by appellant, appellant has only demonstrated that in the specific environments discussed in the references, relatively thin gate oxides are employed. However, appellant has not established that one of ordinary skill in the art would not have interpreted the invention of Yoo, a particular device comprising a 4T SRAM and a floating gate memory on the

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same integrated circuit, as comprising a polysilicon floating gate on a field oxide region, as called for in the appealed claims. The present record is devoid of the requisite objective evidence that the drawings of Yoo are in error.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Edward C. Kimlin  
EDWARD C. KIMLIN  
Administrative Patent Judge

BRADLEY R. GARRIS  
Administrative Patent Judge

BOARD OF PATENT  
APPEALS  
AND  
INTERFERENCES

BEVERLY A. PAWLIKOWSKI  
Administrative Patent Judge

ECK/psb

Appeal No. 2005-0520  
Application 09/768,271

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